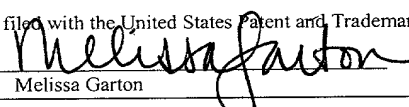
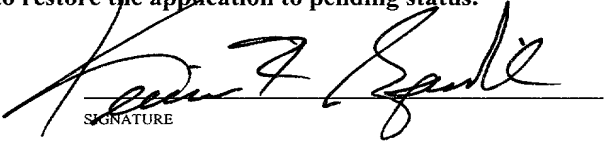


<b>FORM PTO-1390</b> OFFICE (REV 11-2000)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK		ATTORNEY'S DOCKET NUMBER  449122019700	
<b>TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. § 371</b>				U.S. APPLICATION NO. (If known, see 37 CFR 1.5) <b>10/031994</b> Not yet assigned	
INTERNATIONAL APPLICATION NO.  PCT/DE00/02594		INTERNATIONAL FILING DATE  July 27, 2000		PRIORITY DATE CLAIMED  July 27, 1999	
TITLE OF INVENTION  <b>RADIO DEVICE AND METHOD WITH ENERGY EXTRACTION DEVICE</b>					
APPLICANT(S) FOR DO/EO/US  <b>Thomas LUTZENKIRCHEN et al.</b>					
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:					
<div>1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a filing under 35 U.S.C. 371.</div> <div>2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a filing under 35 U.S.C. 371.</div> <div>3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</div> <div>4. <input checked="" type="checkbox"/> The US has been elected by the expiration of 19 months from the priority date (PCT Article 31).</div> <div>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))<div>a. <input checked="" type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</div><div>b. <input type="checkbox"/> has been communicated by the International Bureau.</div><div>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</div></div> <div>6. <input checked="" type="checkbox"/> An English language translation of the International Application under PCT Article 19 (35 U.S.C. 371(c)(2)).<div>a. <input checked="" type="checkbox"/> is attached hereto.</div><div>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</div></div> <div>7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)).<div>a. <input checked="" type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</div><div>b. <input type="checkbox"/> have been communicated by the International Bureau.</div><div>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</div><div>d. <input type="checkbox"/> have not been made and will not be made.</div></div> <div>8. <input checked="" type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</div> <div>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</div> <div>10. <input type="checkbox"/> An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</div>					
<b>Items 11. to 16. below concern document(s) or information included:</b>					
<div>11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</div> <div>12. <input checked="" type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</div> <div>13. <input type="checkbox"/> A FIRST preliminary amendment.</div> <div>14. <input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment.</div> <div>15. <input type="checkbox"/> A substitute specification.</div> <div>16. <input type="checkbox"/> A change of power of attorney and/or address letter.</div> <div>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.</div> <div>18. <input type="checkbox"/> A second copy of the published international application under 35 U.S.C. 154(d)(4).</div> <div>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</div> <div>20. <input checked="" type="checkbox"/> Other items or information: 1. International Search Report 2. IPER 3. Information Data Sheet 4. Return receipt postcard.</div>					
<b>CERTIFICATE OF HAND DELIVERY</b>					
I hereby certify that this correspondence is being hand filed with the United States Patent and Trademark Office in Washington, D.C. on January 25, 2002. <div> Melissa Garton</div>					

U.S. APPLICATION NO. (if known, see 37 CFR 1.53) <b>NOT YET ASSIGNED</b>		INTERNATIONAL APPLICATION NO. <b>PCT/DE00/02594</b>		ATTORNEY'S DOCKET NUMBER: <b>449122019700</b>	
21. <input checked="" type="checkbox"/> The following fees are submitted: <b>BASIC NATIONAL FEE (37 CFR 1.492(a)(1)-(5)):</b> Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO.....\$1,040.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO.....\$890.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO.....\$740.00 International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provision of PCT Article 33(1)-(4) .....\$710.00 International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) .....\$100.00				<b>CALCULATIONS</b> PTO USE ONLY	
<b>ENTER APPROPRIATE BASIC FEE AMOUNT =</b>				\$890.00	
Surcharge of <b>\$130.00</b> for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$0	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	6 - 20 =	0	x \$18.00	\$0	
Independent claims	2 - 3 =	0	x \$84.00	\$0	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$280.00	\$0	
<b>TOTAL OF ABOVE CALCULATIONS =</b>				\$890.00	
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.				\$0	
<b>SUBTOTAL =</b>				\$890.00	
Processing fee of <b>\$130.00</b> for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				+	\$0
<b>TOTAL NATIONAL FEE =</b>				\$890.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). <b>\$40.00 per property</b>				+	\$40.00
<b>TOTAL FEES ENCLOSED =</b>				\$930.00	
				<b>Amount</b>	<b>\$</b>
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				<b>refunded:</b>	
				<b>charged:</b>	<b>\$</b>
a. <input checked="" type="checkbox"/> Please charge my <b>Deposit Account No. 03-1952</b> in the amount of \$930.00 to cover the above fees. Please reference 449122019700. <u>A duplicate copy of this sheet is enclosed.</u> b. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees that may be required, or credit any overpayment to <b>Deposit Account No. 03-1952</b> . Please reference 449122019700. <u>A duplicate copy of this sheet is enclosed.</u> c. <input type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.					
<b>NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive</b> <b>(37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.</b>					
SEND ALL CORRESPONDENCE TO: Kevin R. Spivak Morrison & Foerster LLP 2000 Pennsylvania Avenue, N.W. Washington, D.C. 20006-1888					
 SIGNATURE					
Kevin R. Spivak Registration No. 43,148					

## Description

Radio device with energy extraction device

- 5 The invention relates to a radio device for transmitting radio signals comprising an electrical interface having at least one data terminal for connecting the radio device to an external data source and comprising a transmitting device which is in communication with the at least one data terminal and which generates the radio signals with data signals of the external data source, transmitted via the at least one data terminal.
- 10
- 15 Such a radio device is sold by Deutsche Telekom as a PCMCIA card under the product name "Teledat cordless PCMCIA". This card has a PCMCIA interface by means of which the card can be connected to a laptop or notebook as external data source. A transmitting device which generates radio signals in the DECT standard with data signals of the external data source transmitted via the interface and sends these to a remotely arranged DECT base transceiver station is connected to at least one data terminal of the interface; the interface of the
- 20
- 25 previously known radio device has in addition to the at least one data terminal a power supply terminal via which the radio device is supplied with power from the laptop or notebook.
- 30 The invention is based on the object of specifying a radio device which manages without a power supply terminal and which can be operated without a separate external power supply.
- 35 According to the invention, this object is achieved in a radio device of the type initially described in that the radio device has an energy extraction device, the input of which is connected to the at least one data terminal and

the output of which is connected to a power supply input of the transmitting device and which takes energy from the data signals of the external data source and feeds this energy at the power supply input into the transmitting device in order to operate it.

A significant advantage of the radio device according to the invention consists in that it is functional and can be operated even without separate power supply since it has an energy extraction device which takes energy from the data signals of the external data source and feeds this energy into the transmitting device in order to operate it; the invention makes use of the finding that the data signals generally contain more energy than is actually required for the transmitting device so that this excess energy can be utilized for operating the radio device. Another advantage of the radio device according to the invention consists in that, as a result, it does not need to exhibit a separate power supply terminal for an external power supply device.

A particularly advantageous embodiment of the radio device according to the invention is distinguished by the fact that the energy extraction device has at its input a rectifying device which is followed by an energy store connected to the power supply input of the transmitting device. This embodiment of the radio device according to the invention ensures that energy stored in the energy extraction device can flow only in the direction of the transmitting device and never in the direction of the interface from the energy extraction device.

The rectifying device of this energy extraction device can be implemented in a particularly simple and thus inexpensive manner if it contains a diode for the rectification.

Since in a parallel interface generally more data terminals and thus more data signals are available, the energy of which can be utilized by the energy extraction device, than in the case of a serial interface, it is considered to be advantageous if the interface is a parallel interface having a number of data terminals. It is known, incidentally, that data can be transmitted more rapidly via a parallel interface than via a serial interface.

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The IEEE 1284 interface has been particularly successful as an interface for use in the computer domain with the result that it is considered to be advantageous is the interface is an IEEE 1284 interface.

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To achieve a situation whereby the radio device according to the invention can also exhibit transmitting powers which require more energy than can be obtained by means of the energy extraction device, it is proposed according to a further development of the radio device according to the invention that the transmitting device has a further power supply input for connecting an external power supply device, and that the transmitting device is of such a nature that the radio signals generated by it exhibit a first predetermined transmitting power in the case where the power is supplied exclusively by the energy extraction device, and exhibit a second predetermined transmitting power exceeding the predetermined transmitting power in the case where voltage/current is applied to the further power supply input.

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To explain the invention

Figure 1 shows an exemplary embodiment of a radio device with energy extraction device according to the invention and

Figure 2 shows an exemplary embodiment of the energy extraction device according to Figure 2.

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Figure 1 shows a radio device 5 for transmitting radio signals FSE, with an electrical interface SS in the form of an IEEE 1284 interface. For the sake of clarity, Figure 1 only shows a single data terminal of the interface SS; in the figure, this data terminal carries the reference symbol E5A. The data terminal E5A or, respectively, the interface SS, is connected to a data input E10A of a transmitting device 10 and an input E15A of an energy extraction device 15. The energy extraction device 15 has an output A15 which is connected to a power supply input E10B of the transmitting device 10. A further power supply input E10C of the transmitting device 10 is connected via a matching circuit 17 to a power supply terminal E5B of the radio device 5; at this power supply terminal E5B, the radio device 5 is preceded by a power supply device 20 in the form of a mains adapter or a battery.

The transmitting device 10 exhibits at its input a modulation device 25, the interface input SS25 of which is connected to the data input E10A of the transmitting device 10. An output A25 of the modulation device 25 is connected to an output amplifier 30 which is followed by a power amplifier 35. At the output end, this power amplifier 35 is connected to an input E40 of a signal diplexer 40 which is followed at an output A40A by an antenna 45 for transmitting and receiving radio signals. A further output A40B of the signal diplexer 40 is followed by an input amplifier 50 which is followed by an input E25 of the modulation device 25.

For the purpose of energy supply, the modulation device 25, the input amplifier 50 and the output amplifier 30 in each case have a power supply input - reference symbol U25, U30 and U50, which is connected to the one power supply input E10B of the transmitting device 10 and to the output A15 of the energy extraction device 15. The

modulation device 25 can be, for example, a digital modulation/demodulation device which operates in the DECT, GSM, Bluetooth or another comparable standard; in consequence, the transmitting device 20 can thus be a  
5 DECT, GSM, Bluetooth or comparable device.

The radio device 5 according to the invention is operated as follows. A data signal DSE of an external data source (not shown), for example a computer, which  
10 is fed into the transmitting device 10 via the interface SS is fed into the transmitting device 10 and thus into the modulation device 25. In the modulation device 25, the data signal DSE is converted into a radio signal FSE and transmitted to the amplifier 30.  
15 In the amplifier 30, the radio signal FSE is amplified and transmitted via the signal diplexer 40 to the antenna 45 in which the radio signal FSE is radiated; if necessary, the power of the radio signal FSE is amplified in the power amplifier 35 before it is  
20 radiated. Whether or not power amplification is carried out in the power amplifier 35 depends on whether an operating voltage U2 is applied to the power amplifier 35 via the matching circuit 17 from the power supply device 20; if this is not the case, the power amplifier  
25 35 acts "transparently" and allows the radio signal FSE to pass unattenuated. The matching circuit 17 is thus used for transforming or converting an output voltage U3 of the power supply device 20 into the operating voltage U2 suitable for the power amplifier 35.

30 The transmitting device 10 can also be operated as a receiving device so that it could also be called a transceiver device or transmitting and/or receiving device. If a received radio signal FSE' is received via  
35 the antenna 45, it passes via the signal diplexer 40 to the further amplifier 50, where it is amplified. The received radio signal FSE' then passes to input E25 of the modulation device 25, where it is demodulated by

a suitable demodulation method and converted into a received data signal DSE'. This received data signal DSE' is output via the interface SS.

5 The modulation device 25 and the two amplifiers 30 and 50 are supplied with energy or, respectively, supply voltage or current by the energy extraction device 15. This is done in such a manner that the data signals DSE transmitted via the interface SS are transmitted to the  
10 energy extraction device 15 where energy is taken from the data signals DSE, which is output in the form of a supply voltage U to the one power supply input E10B of the transmitting device 10, and thus to the modulation device 25 and the two amplifiers 30 and 50. The manner  
15 in which the energy extraction device 25 extracts the energy from the data signals DSE will be explained in connection with Figure 2.

As already discussed, the transmitting device 10 is  
20 connected to the matching circuit 17 which is connected to the power supply device 20 and which feeds the operating voltage U2 into the power amplifier 35. As already explained, this power amplifier 35 is used for amplifying the radio signal FSE which is already  
25 preamplified in the one amplifier 30; if a low transmitting power as delivered by the output amplifier 30 is sufficient for operating the radio device 5, the use or operation of the power amplifier 35 can be omitted. In this case, the power amplifier can be  
30 switched off or switched to "passage" by disconnecting the power supply device 20 from the power amplifier 35. The transmitting device 10 then operates without external power supply and, in consequence, without power amplification. If, in contrast, it is intended to  
35 transmit with greater output power than is possible by means of the energy of the energy extraction device 25 alone, this greater output power can be achieved by connecting



the power supply device 20 to the power amplifier 35.

It will now be explained in conjunction with Figure 2 and using an example how the energy extraction device 15 can be configured. At input E15A of the energy extraction device 15, a current limiting device in the form of a resistor 100 is provided which is followed by a diode 110 as rectifying device. The diode 110 is followed by a capacitor 120 as energy store, across the two terminals E120A and E120B of which a capacitor voltage  $U_c$  is present. One of the two terminals E120A is connected to a DC/DC converter 130 which converts the capacitor voltage  $U_c$  into the supply voltage  $U$  for the one power supply input E10B of the transmitting device 10. The DC/DC converter 130 can be a conventional, commercially available converter; it is only essential that this converter is selected in such a manner that it transforms the capacitor voltage  $U_c$ , which depends on the signal voltage  $U_{\text{signal}}$  of the data signal DSE or, respectively, on the voltage level of the interface SS, to the magnitude suitable for the one power supply input E10B of the transmitting device 10. It may also be possible to omit the DC/DC converter 130 if the signal voltage  $U_{\text{signal}}$  of the data signal DSE matches the supply voltage  $U$  required for the transmitting device 10; this is the case, for example, if the data signal DSE, and thus the interface SS, have the same voltage level as is needed as supply voltage  $U$  by the transmitting device 10.

In the text which follows, an example of dimensioning of the resistor 100 will be specified. The assumption is that the signal voltage  $U_{\text{signal}}$  of the data signal DSE is  $U_{\text{signal}} = 5 \text{ V}$ . According to the representation in Figure 2, the total current  $i$ , carrying the data signal DSE, flowing into the radio device 5

at the interface SS or, respectively, at input E5, is divided into two part currents  $i'$  and  $i''$ . One part current  $i'$  flows into the transmitting device 10 at input E10A and transmits the data signal DSE to the transmitting device 10; the other part current  $i''$  is utilized in the energy extraction device 15. So that the interface SS is not overloaded, it must be ensured that the total current  $i = i' + i''$  is not greater than the maximum permissible current  $i_{\max}$  which is allowed to flow at a maximum via the interface SS or, respectively, via the data terminal E5A. For this purpose, the resistor R is provided which operates as current limiter and correspondingly limits the current. If, for example, a maximum permissible current  $i_{\max}$  of 20 mA and a part current  $i'$  of 5 mA flowing into the transmitting device 10 is assumed and if the signal voltage  $U_{\text{signal}}$  is, for example,  $U_{\text{signal}} = 5 \text{ V}$ , the following is obtained for the resistor R:

$$i'' = i - i' = 20 \text{ mA} - 5 \text{ mA} = 15 \text{ mA}$$

$$R = U_{\text{signal}}/i'' = U_{\text{signal}}/(i-i') = 5 \text{ V} / 15 \text{ mA} = 333 \Omega$$

In this example, the threshold voltage of the diode is neglected. The capacitor voltage  $U_c$  across the capacitor 120 is assumed to be 0 V since the capacitor 120 is generally discharged when the radio device 5 is switched on.

Once the other part current  $i''$  has passed through the resistor 100, it passes via diode 110 to the downstream capacitor 120 and the DC/DC converter 130. Diode 120 prevents the energy stored in the capacitor 120 from being able to flow off or back, respectively, from the capacitor 120 via the data terminal E5A or, respectively, the interface SS from the radio device 5 in the case of changes in potential - for example to zero volts - at the interface SS or, respectively, the data terminal E5A.

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Patent claims

1. A radio device (5) for transmitting radio signals (FSE)
- 5 - comprising an electrical interface (SS) having at least one data terminal (E5A) for connecting the radio device (5) to an external data source, and
- comprising a transmitting device (10) which is in communication with the at least one data terminal
- 10 (E5A) and which
- generates the radio signals (FSE) with data signals (DSE) of the external data source, transmitted via the at least one data terminal (E5A),
- characterized in that
- 15 - the radio device (5) exhibits
- an energy extraction device (15), the
- input of which is connected to the at least one data terminal (E5A) and the output of which is connected to a power supply input (E10B) of the
- 20 transmitting device (10) and which
- takes energy from the data signals (DSE) of the external data source and feeds this energy at the power supply input (E10B) into the transmitting device in order to operate it,
- 25 - in that the transmitting device (10) exhibits a further power supply input (E10C) for connecting an external power supply device, and
- in that the transmitting device (10) is of such a nature that the radio signals (FSE) generated by it
- 30 - exhibit a first predetermined transmitting power in the case where the power (U) is supplied exclusively by the energy extraction device (15), and
- exhibit a second predetermined transmitting power
- 35 exceeding the predetermined transmitting power in the case where voltage/current is applied to the further power supply input (E10C).

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2. The radio device as claimed in claim 1,  
characterized in that

the energy extraction device (15) has at its input a rectifying device (110) which is followed by an energy store (120) connected to the power supply input (E10B) of the transmitting device (10).

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3. The radio device as claimed in claim 2, characterized in that  
- the rectifying device (110) contains a diode for rectification.

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4. The radio device as claimed in claim 1, 2 or 3, characterized in that  
- the interface (SS) is a parallel interface having a number of data terminals.

15

5. The radio device as claimed in claim 4, characterized in that  
- the interface (SS) is an IEEE 1284 interface.

## Abstract

### Radio device with energy extraction device

The invention relates to a radio device (5) for transmitting radio signals (FSE) comprising an electrical interface (SS) having at least one data terminal (E5A) for connecting the radio device (5) to an external data source, and comprising a transmitting device (10) which is in communication with the at least one data terminal (E5A) and which generates the radio signals (FSE) with data signals (DSE) of the external data source, transmitted via the at least one data terminal (E5A).

To achieve a situation whereby such a radio device can also be operated without separate power supply, it is provided according to the invention that the radio device (5) exhibits an energy extraction device (15), the input of which is connected to the at least one data terminal (E5A) and the output of which is connected to a power supply input (E10B) of the transmitting device (10) and which takes energy from the data signals (DSE) of the external data source and feeds this energy at the power supply input (E10B) into the transmitting device in order to operate it.

FIGURE 1

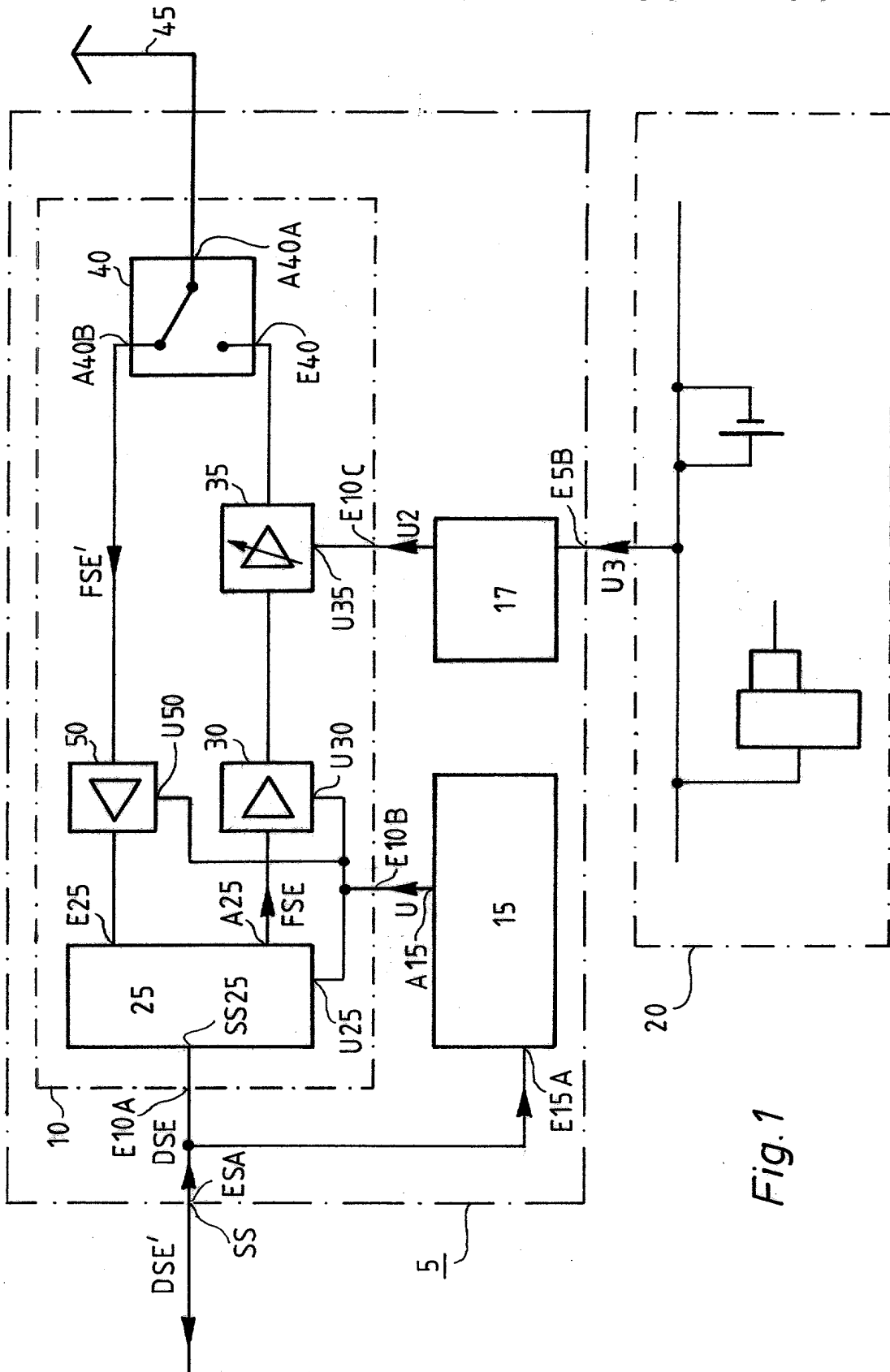


Fig. 1



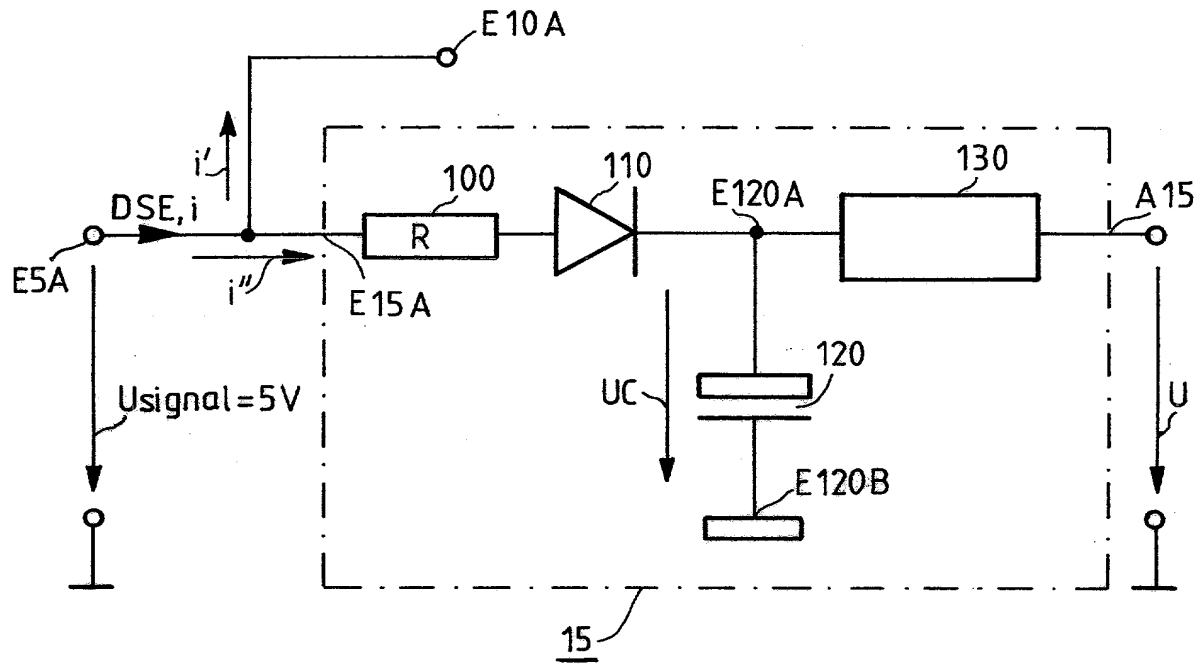


Fig. 2

# Declaration and Power of Attorney For Patent Application

## *Erklärung Für Patentanmeldungen Mit Vollmacht*

### German Language Declaration

Als nachstehend benannter Erfinder erkläre ich hiermit an Eides Statt:

As a below named inventor, I hereby declare that:

dass mein Wohnsitz, meine Postanschrift, und meine Staatsangehörigkeit den im Nachstehenden nach meinem Namen aufgeführten Angaben entsprechen,

My residence, post office address and citizenship are as stated below next to my name,

dass ich, nach bestem Wissen der ursprüngliche, erste und alleinige Erfinder (falls nachstehend nur ein Name angegeben ist) oder ein ursprünglicher, erster und Miterfinder (falls nachstehend mehrere Namen aufgeführt sind) des Gegenstandes bin, für den dieser Antrag gestellt wird und für den ein Patent beantragt wird für die Erfindung mit dem Titel:

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

#### Funkeinrichtung mit Energieextraktionseinrichtung

#### Radio comonication device comprising a power extraction

deren Beschreibung

the specification of which

(zutreffendes ankreuzen)

(check one)

☐ hier beigefügt ist.

☐ is attached hereto.

☒ am 27.07.2000 als

☒ was filed on 27.07.2000 as

PCT internationale Anmeldung

PCT international application

PCT Anwendungsnummer PCT/DE00/02594

PCT Application No. PCT/DE00/02594

eingereicht wurde und am \_\_\_\_\_

and was amended on \_\_\_\_\_

abgeändert wurde (falls tatsächlich abgeändert).

(if applicable)

Ich bestätige hiermit, dass ich den Inhalt der obigen Patentanmeldung einschliesslich der Ansprüche durchgesehen und verstanden habe, die eventuell durch einen Zusatzantrag wie oben erwähnt abgeändert wurde.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims as amended by any amendment referred to above.

Ich erkenne meine Pflicht zur Offenbarung irgendwelcher Informationen, die für die Prüfung der vorliegenden Anmeldung in Einklang mit Absatz 37, Bundesgesetzbuch, Paragraph 1.56(a) von Wichtigkeit sind, an.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

Ich beanspruche hiermit ausländische Prioritätsvorteile gemäss Abschnitt 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 119 aller unten angegebenen Auslandsanmeldungen für ein Patent oder eine Erfindersurkunde, und habe auch alle Auslandsanmeldungen für ein Patent oder eine Erfindersurkunde nachstehend gekennzeichnet, die ein Anmeldedatum haben, das vor dem Anmeldedatum der Anmeldung liegt, für die Priorität beansprucht wird.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

# German Language Declaration

Prior foreign applications  
Priorität beansprucht

Priority Claimed

19935755.2

DE

27.07.1999

☒

☐

(Number)  
(Nummer)

(Country)  
(Land)

(Day Month Year Filed)  
(Tag Monat Jahr eingereicht)

Yes  
Ja

No  
Nein

(Number)  
(Nummer)

(Country)  
(Land)

(Day Month Year Filed)  
(Tag Monat Jahr eingereicht)

☐  
Yes  
Ja

☐  
No  
Nein

(Number)  
(Nummer)

(Country)  
(Land)

(Day Month Year Filed)  
(Tag Monat Jahr eingereicht)

☐  
Yes  
Ja

☐  
No  
Nein

Ich beanspruche hiermit gemäss Absatz 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 120, den Vorzug aller unten aufgeführten Anmeldungen und falls der Gegenstand aus jedem Anspruch dieser Anmeldung nicht in einer früheren amerikanischen Patentanmeldung laut dem ersten Paragraphen des Absatzes 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 122 offenbart ist, erkenne ich gemäss Absatz 37, Bundesgesetzbuch, Paragraph 1.56(a) meine Pflicht zur Offenbarung von Informationen an, die zwischen dem Anmeldedatum der früheren Anmeldung und dem nationalen oder PCT internationalen Anmeldedatum dieser Anmeldung bekannt geworden sind.

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §122, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

(Application Serial No.)  
(Anmeldeseriennummer)

(Filing Date D, M, Y)  
(Anmeldedatum T, M, J)

(Status)  
(patentiert, anhängig,  
aufgegeben)

(Status)  
(patented, pending,  
abandoned)

PCT/DE00/02594

(Application Serial No.)  
(Anmeldeseriennummer)

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(Filing Date D,M,Y)  
(Anmeldedatum T, M, J)

(Status)  
(patentiert, anhängig,  
aufgeben)

pending  
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(patented, pending,  
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

## German Language Declaration

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